

## NON-OBVIOUS ENCLOSURE AND LID

### **FIELD OF THE INVENTION**

[0001] The present invention relates to a non-obvious enclosure and lid for said enclosure.

### **BACKGROUND OF THE INVENTION**

[0002] Non-obvious enclosures for storing objects in unsuspecting places have been used widely. Usually these enclosures employ a cover that is fitted to be held in the cavity by friction, or a cover that is attached by a hidden hinge.

[0003] Covers held in place by friction are susceptible to either seizure, whereby they become difficult to remove, or wear. Wear can occur on the cover, or on the parts of the cavity that frictionally engage the cover, and results in an improper fit. Wear on either the cover or the cavity increases the probability of the cover inadvertently falling from its desired position.

[0004] Covers held in place by hidden hinges require careful manufacture to fully conceal the hinge. Additionally, with use, the hinge is subject to both seizure and mechanical wear, with similar effect to that of the cover held by friction.

[0005] As a result of these limitations it would be desirable to provide a non-obvious enclosure for storing objects in unsuspecting places having a cover that uses neither friction nor a hidden hinge.

### **SUMMARY OF THE INVENTION**

[0006] It is an object of the present invention to obviate or mitigate at least one disadvantage of previous non-obvious enclosures.

[0007] In a first aspect of the present invention there is provided an enclosure that comprises a cavity, a lid sized to cover the cavity, securing means that are attached to the cavity for releasably engaging the lid, and pivot means attached to the cavity and spaced

from the securing means, for supporting the lid and for providing a fulcrum about which the lid can pivot under downward on a region not engaged to the securing means to release the lid from the securing means. In embodiments of the first aspect of the invention there may also be a lip, raised from the bottom of the cavity to a level below the top of the cavity, for supporting the lid, said lip raised to a level below the cavity such that when supporting the lid, the lid is flush with the top of the cavity. In other embodiments, the lip extends substantially around half the cavity, the securing means is attached to the lip and the pivot means are integral with the terminal edges of the raised lip. In other embodiments of the first aspect of the invention the securing means is magnetic, and the lid is metal, sized to fit a rectangular cavity, wherein the lip is positioned along one complete side, and two half sides.

[0008] In another aspect of the present invention there is provided an enclosure comprised of a substantially rectangular cavity that has a raised lip on three of its inner edges and substantially extends around one half of the cavity, mounted in the raised lip are securing means, and a removable lid, for covering the cavity, and for releasable engagement with the securing means when resting on the raised lip, by pivoting about the terminal edges of the raised lip. In other embodiments of this aspect the securing means is magnetic, and the lid is metallic.

[0009] Other aspects and features of the present invention will become apparent to those ordinarily skilled in the art upon review of the following description of specific embodiments of the invention in conjunction with the accompanying drawings.

## **BRIEF DESCRIPTION OF THE DRAWINGS**

[0010] Embodiments of the present invention will now be described, by way of example only, with reference to the attached drawings, wherein:

Figure 1 illustrates an embodiment of the present invention where the lid covers the cavity;

Figure 2 illustrates an embodiment of the present invention where the lid is removed from the cavity;

Figure 3 illustrates an embodiment of the present invention where the lid is pivoted about the edge of the raised lip;

Figure 3a illustrates an embodiment of the present invention where the lid is pivoted and removed from the cavity;

Figure 4 illustrates an embodiment of the present invention where the lid covers the cavity;

Figure 5 illustrates an embodiment of the present invention in cross section with the lid covering the cavity;

Figure 5a illustrates an embodiment of the present invention in cross section with the lid pivoted;

Figure 6 illustrates an embodiment of the present invention where the lid is pivoted;

Figure 7 illustrates an embodiment of the present invention in cross section with the lid pivoted;

Figure 8 illustrates a further embodiment of the present invention with the lid magnet held in a bulge; and

Figure 9 illustrates the further embodiment shown in Figure 8.

#### **DETAILED DESCRIPTION**

[0011] The present invention is a closure for a hidden enclosure and will be illustrated as a secret compartment in a guitar string changing tool case, though one of skill in the relevant art will appreciate that this represents only one non-limiting embodiment.

[0012] Figure 1 illustrates cover lid 100 covering the compartment. To an uninformed observer lid 100 is merely a decorative plate. In one embodiment, the lid can be engraved

so that it appears as a simple name plate. As illustrated in Figure 2, lid 100 covers compartment 102. Compartment 102 has a raised lip 104 on which lid 100 rests. In lip 104 is a magnet 106, which serves as securing means for lid 100, which in the present embodiment is a metallic plate. As can be seen in Figure 2, raised lip 104 does not completely encircle compartment 102. The magnet 106 can alternatively be arranged in a protruding bulge 106' of the raised lip 104, as shown in Figures 8 and 9, to allow for a larger magnet for instance.

[0013] Figure 3 illustrates the removal of lid 100 from compartment 102. Pressure is applied to lid 100, on the side opposite magnet 106. Raised lip 104 does not extend to the region in which pressure is applied. As a result lid 100 pivots about the terminal edges of raised lip 104. The terminal edges are acting as a fulcrum. Upon the application of sufficient pressure, lid 100 will separate from magnet 106, and can be removed.

[0014] Figure 4 illustrates compartment 102 from above with lid 100 in place, and with magnet 106 and raised lip 104 shown as hidden features.

[0015] Figure 5 and 5A illustrate compartment 102 in cross section, and lid 100 acting as a class one lever to detach from magnet 106, with the fulcrum of the lever being the edge of raised lip 104.

[0016] Figure 6 illustrates the removal of lid 100 from compartment 102, as a top view, while Figure 7 shows the removal in cross section.

[0017] One of skill in the art will appreciate that the exact shape and relative size of the various elements illustrated in the above mentioned figures are exemplary in nature and are not intended to limit the scope of the present invention. As an example, the raised lip 104 can be extended to reach any point along the sidewalls of compartment 102. The length of raised lip 104 is a design decision between the stability of lid 100, which is increased with a long lip, and ease of removal of lid 100 with a shortened lip, which places the fulcrum of the lever closer to the load.

[0018] The positioning of magnet 106, or other securing means, and the use of the edges of the raised lip as a fulcrum as described above represent presently preferred embodiments. It will be apparent to one of skill in the art that the securing means and the fulcrum need not be embedded in a raised lip, and can be freely embedded in the sidewalls of the cavity, obviating the need for a raised lip. This suggested embodiment increases manufacturing complexity, increase the size of the cavity, and decreases the stability of the lid while mounted to the cavity. Additionally, a raised lip that does not extended through three sidewalls can also be employed, so long as a proper fulcrum is provided, and the securing means is supported. The securing means can be mounted flush with the surface of the raised lip, or slightly offset, so as to trade manufacturing difficulty with seamless mounting of the lid 100.

[0019] Additionally, it may be desirable to employ non-magnetic securing means, such as re-usable tape or an adhesive. Replacement of the magnet also allows the use of a non-magnetic cover plate 100.

[0020] The above-described embodiments of the present invention are intended to be examples only. Alterations, modifications and variations may be effected to the particular embodiments by those of skill in the art without departing from the scope of the invention, which is defined solely by the claims appended hereto.